# UNIVERSITÀ DEGLI STUDI DI PALERMO

| DEPARTMENT | Scienze Umanistiche | | |
|---|---|---|---|
| ACADEMIC YEAR | 2019/2020 | | |
| BACHELOR'S DEGREE (BSC) | ARTS, MUSIC AND PERFORMING ARTS | | |
| INTEGRATED COURSE | HUMANISTIC COMPUTER SCIENCE | | |
| CODE | 13563 | | |
| MODULES | Yes | | |
| NUMBER OF MODULES | 2 | | |
| SCIENTIFIC SECTOR(S) | ING-INF/05 | | |
| HEAD PROFESSOR(S) | CHELLA ANTONIO | Professore Ordinario | Univ. di PALERMO |
| OTHER PROFESSOR(S) | AUGELLO AGNESE | Professore a contratto | Univ. di PALERMO |
| | CHELLA ANTONIO | Professore Ordinario | Univ. di PALERMO |
| CREDITS | 9 | | |
| PROPAEDEUTICAL SUBJECTS | | | |
| MUTUALIZATION | | | |
| YEAR | 2 | | |
| TERM (SEMESTER) | 2° semester | | |
| ATTENDANCE | Not mandatory | | |
| EVALUATION | Out of 30 | | |
| TEACHER OFFICE HOURS | **AUGELLO AGNESE** <br><br> Tuesday 08:00 09:00 Aula Seminari C1Il ricevimento e' fissato orientativamente prima della lezione ma e' preferibile fissare degli appuntamenti su richiesta. <br><br> **CHELLA ANTONIO** <br><br> Monday 09:00 11:00 DICGIM, edificio 6, III piano | | |

## MODULE
## MUSIC COMPUTER SCIENCE

*Prof. ANTONIO CHELLA*

| SUGGESTED BIBLIOGRAPHY | |
|---|---|
| Vincenzo Lombardo, Andrea Valle: Audio e Multimedia, quarta edizione, Apogeo | |
| **AMBIT** | 10645-Attività formative affini o integrative |
| **INDIVIDUAL STUDY (Hrs)** | 120 |
| **COURSE ACTIVITY (Hrs)** | 30 |

**EDUCATIONAL OBJECTIVES OF THE MODULE**

The general topics of Sound and Music Computing are in agreement with the ACM Computing Classification System. In particular, the educational objectives of the course cover all or parts of the Sound and Music Computing 2007 roadmap of the S2S2 (Sound to Sense, Sense to Sound) Consortium, established as Coordination Action by European Commission under 6th FET Open Call: http://smcnetwork.org/roadmap
More in details, the lectures of the course will cover the "in-focus content areas" reported in Appendix A of the roadmap, representing the core disciplines of a course in Sound and Music Computing:
- Sound Modelling
- Sound Analysis and Coding
- Music Information Processing - Music Performance

## SYLLABUS

| Hrs | Frontal teaching |
|---|---|
| 3 | Introduction of sound and music computing |
| 3 | Fundamentals of acoustics and sound perception |
| 3 | Digital representation of sound and music |
| 3 | Audio file compression |
| 3 | Sound synthesis |
| 3 | Algorithmic composition |
| 3 | Musical robotics |
| 3 | MIDI protocol |

| Hrs | Practice |
|---|---|
| 3 | Analysis of the software system Audacity |
| 3 | Analysis of the MIDI software system MuLab |